

**UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

**LUPERCAL LLC,**

Plaintiff

v.

**CITIBANK, N.A.,**

Defendant

**Case No. 6:19-cv-00201-ADA**

**JURY TRIAL DEMANDED**

**AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Lupercal LLC (“Lupercal” or “Plaintiff”) files this Complaint for patent infringement against Defendant Citibank, N.A. (“Citibank” or “Defendant”), and alleges as follows:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under 35 U.S.C. § 1 *et seq.*

**PARTIES**

2. Lupercal is a limited liability company organized and existing under the laws of the State of Texas with its principal place of business in Dallas, Texas.

3. Upon information and belief, Defendant, Citibank, is a New York national chartered bank having a principal place of business in this judicial district at 100 Citibank Dr, San Antonio, Texas 78245.

**JURISDICTION AND VENUE**

4. This Court has original jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. Upon information and belief, Defendant is subject to personal jurisdiction of this Court based upon it having regularly conducted business, including the acts complained of herein, within the State of Texas and this judicial district and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this District.

6. Upon information and belief, Defendant has established a Citibank Operations Center as regularly established place of business in this judicial district at 100 Citibank Dr. San Antonio, Texas 78245.

7. Upon information and belief, Defendant employee hundreds of employees in this judicial district.

8. Defendant currently advertises six open positions for employment in San Antonio, Texas.

## 6 Jobs in San Antonio

### Filtered By:

San Antonio, Texas, United States [x]

#### **Fraud Ops Specialist 4 - Retail Electronic Fraud Analysis**

San Antonio, Texas, United States  
04/23/2019

#### **GIDA Manager**

San Antonio, Texas, United States  
04/22/2019

#### **Client Service Intermediate Associate**

San Antonio, Texas, United States  
04/22/2019

#### **Ops Sup Group Manager**

San Antonio, Texas, United States  
04/22/2019

#### **Customer Service - Service Rep 3**

San Antonio, Texas, United States  
04/15/2019

#### **Registered Client Service Associate**

San Antonio, Texas, United States  
04/04/2019

<https://jobs.citi.com/location/san-antonio-texas-united-states-city-jobs/287/6252001-4736286-4674023-4726206/4> (last accessed May 2, 2019).

9. On information and belief, Defendant operates a call center in San Antonio, Texas.

Career Opportunity
APPLY NOW

**Fraud Ops Specialist 3 - San Antonio**

- Primary Location: United States, Texas, San Antonio
- Education: High School Diploma/GED
- Job Function: Operations Credit Ops
- Schedule: Full-time
- Shift: Variable
- Employee Status: Regular
- Travel Time: No
- Job ID: 19021201

**Description**

**Fraud Ops Specialist 3**

At Citi, we've been tackling the world's toughest challenges and seizing its greatest opportunities for over 200 years. The financial solutions we create for our clients achieve outcomes that truly shape communities, businesses and the larger world of finance.

**Achievements with impact: that's what drives us. How about you?**

We are looking for highly motivated, analytical individuals to fill the role of Operations Fraud Specialist. The Fraud role is a fast-paced and challenging position that relies on the ability to demonstrate good judgment and make informed decisions under pressure, while serving clients with the utmost dedication. Each representative will identify suspicious patterns of credit card spending and take action to reduce fraud exposure in its earliest stages.

**On a day to day basis our Fraud Representatives will be called on to:**

- Serve as the human voice and personality behind the Citi brand providing quality customer service with each and every client interaction
- Will take a variety of calls to include **inbound and outbound call center work**
- Will be cross trained in multiple functions within the department
- Identify credit card behaviors that pose future risk to the client and Citi
- Develop a trusting relationship with the client, while taking action to reduce fraud exposure in its earliest stages
- Investigate unbilled and posted transactions to resolve identity and transaction fraud
- Achieve monthly individual and team based targeted performance goals
- Commit to treating clients and teammates with the utmost integrity and respect
- Challenge yourself to go one better for clients and raise the bar for excellence in customer service

HTFCC

<https://jobs.citi.com/job/san-antonio/fraud-ops-specialist-3-san-antonio/287/11740590> (last accessed on May 2, 2019).

Career Opportunity
APPLY NOW

### Fraud Ops Specialist 4 - Retail Electronic Fraud Analysis

- **Primary Location:** United States, Texas, San Antonio
- **Education:** High School Diploma/GED
- **Job Function:** OPERATIONS - SERVICES
- **Schedule:** Full-time
- **Shift:** Evening Job
- **Employee Status:** Regular
- **Travel Time:** No
- **Job ID:** 19018461

#### Description

**Fraud Representative - Fraud Ops Specialist 4 - C04**

At Citi, we've been tackling the world's toughest challenges and seizing its greatest opportunities for over 200 years. The financial solutions we create for our clients achieve outcomes that truly shape communities, businesses and the larger world of finance.

**Achievements with impact: that's what drives us. How about you?**

We are looking for highly motivated, analytical individuals to fill the role of Operations Fraud Specialist. The Fraud role is a fast-paced and challenging position that relies on the ability to demonstrate good judgment and make informed decisions under pressure, while serving clients with the utmost dedication. Each representative will identify suspicious patterns of credit card spending and take action to reduce fraud exposure in its earliest stages.

**On a day to day basis our Fraud Representatives will be called on to:**

- Serve as the human voice and personality behind the Citi brand providing quality customer service with each and every client interaction
- Develop a trusting relationship with the client, while taking action to reduce fraud exposure in its earliest stages
- Achieve monthly individual and team based targeted performance goals
- Commit to treating clients and teammates with the utmost integrity and respect
- Challenge yourself to go one better for clients and raise the bar for excellence in customer service
- Review and research all items referred in high volume heavy production call center environment
- Utilize Citismart and multiple source systems for account maintenance and case research
- Identify unusual transaction behavior patterns on client accounts
- Manage challenging online user interviews
- Inbound/Outbound call handling 25% of daily activity
- Maintain positive internal and external client relationships
- Strong independent and team accountability of decisions related to client needs and fraud mitigation efforts
- Contact peer financial institutions to verify information and/or coordinate loss recovery/mitigation.

<https://jobs.citi.com/job/san-antonio/fraud-ops-specialist-4-retail-electronic-fraud-analysis/287/11634018> (last accessed May 2, 2019).

Career Opportunity
APPLY NOW

**Client Service Intermediate Associate**

- **Primary Location:** United States, Texas, San Antonio
- **Education:** Associate's Degree/College Diploma
- **Job Function:** Commercial and Business Sales
- **Schedule:** Full-time
- **Shift:** Day Job
- **Employee Status:** Regular
- **Travel Time:** Yes, 10 % of the Time
- **Job ID:** 19016696

**Description**

On a daily basis, an Intermediate CSR (Citi Service Representative) will be responsible for the following:

- CSRs utilize expert business, industry, and operational knowledge in addition to frequent client interaction to identify value added products and client solutions for cross-sell opportunities. These CSRs provide input and decisions on Cash Management, Liability by consulting on policy compliance, operational constraints and service performance risk
- Responsibilities also include integrity of account opening / on-boarding activities and documentation, specifically for Regulatory, Know Your Customer (KYC) and Anti-Money Laundering (AML) compliance and to ensure timeliness of account setup and data quality
- Comprehensive execution of this position requires on-going judgment and subject matter expertise to ensure compliance is maintained within Global Banking Policy, Anti-Money Laundering and Know Your Customer requirements
- CSRs ensure legal, regulatory and operational control requirements are maintained across their assigned diverse complex customer base on an ongoing basis
- CSRs perform MCA= Management Control Assessment testing to ensure dynamic controls.
- Leveraging Customer feedback and industry experience, CSRs provide advanced consultative support regarding product terms and conditions and needed competitive market enhancements.
- Provide guidance on the direction and development of organization wide process improvement programs.
- Provide leadership on taskforces whose mission is to achieve our goal of bringing service to the next level
- CSRs help identify the source/cause of significant customer issues so that they can be eliminated

<https://jobs.citi.com/job/san-antonio/client-service-intermediate-associate/287/11621876> (last accessed May 2, 2019).

Career Opportunity

APPLY NOW

Ops Sup Group Manager

- Primary Location: United States,Texas,San Antonio
- Other Location: United States,Arizona,Tucson; United States,Florida,Jacksonville; United States,Kentucky,Florence
- Education: Bachelor's Degree
- Job Function: Operations - Core
- Schedule: Full-time
- Shift: Day Job
- Employee Status: Regular
- Travel Time: Yes, 10 % of the Time
- Job ID: 19017571

Description

Ops Sup Group Manager

Description

US Retail Bank Core Operations seeks an engaged, multi-dimensional, and influential leader for the Automation, Control, and Communication team. This individual will lead a group of approximately 30 professionals working initiatives ranging from Control and Issue Management, to Automation efforts through robotics and systems optimizations, to Culture and Communication activities for the approximately 750 employees of Core Ops. Additionally, the ideal candidate will provide mission-critical assistance to the head of Core Operations on a variety of strategic and operational fronts as a demonstrated leader who functions tactically and with forward-thinking focus, demonstrates and encourages innovation, and can interface graciously and diplomatically with stakeholders from many businesses and levels.

<https://jobs.citi.com/job/san-antonio/ops-sup-group-manager/287/11609181> (last accessed May 2, 2019).

Career Opportunity
APPLY NOW

**Registered Client Service Associate**

- Primary Location: United States, Texas, San Antonio
- Education: High School Diploma/GED
- Job Function: Sales
- Schedule: Full-time
- Shift: Day Job
- Employee Status: Regular
- Travel Time: No
- Job ID: 19015713

**Description**

The Registered Client Service Associate (CSA) role is a fully registered sales support position. This position will provide operational and sales support to an assigned pool of Independent Financial Advisors. Incumbents may also on a regular basis support of business initiatives, regulatory inquiries as well as interfacing directly with clients. For established clients, the RCSA often serves as the most frequent point of contact with CPWM.

**Job Description:**

Manage and execute client transactions with respect to business and individual investment products. Ensure transactions are completed within audit and compliance standards as well as timely.

Coordinate account opening and maintenance for all products and reporting including address changes, telephone number updates, account status changes, rates and fee waivers.

Enforce banking policies and procedures to ensure operational integrity while maintaining high client satisfaction.

Execute on Administrative tasks, when appropriate. This could include scheduling, telephony handling, travel arrangements, expense management, etc.

Take ownership of client investigations (e.g., statement reporting issues and pricing inquiries) and collaborate with operational and middle office teams to ensure effective resolution.

Take an active role in scheduling FA/client appointments to build upon existing or establish new relationships.

Act as a willing partner in the Retail Branch Environment, helping partners to ensure a best in class client experience across multiple segments

Identify and document new business opportunities for referral to banker or product specialist.

Be attentive and diligent in daily work habits to recognize fraudulent transactions.

As required, may train less experienced team members

Partner with the Financial Advisors to help enhance business development, client relationships, prospecting opportunities, and overall success.

Process wire and ACH requests for clients.









Involvement with the AML/KYC process for all new clients.

<https://jobs.citi.com/job/san-antonio/registered-client-service-associate/287/11444706> (last accessed May 2, 2019).

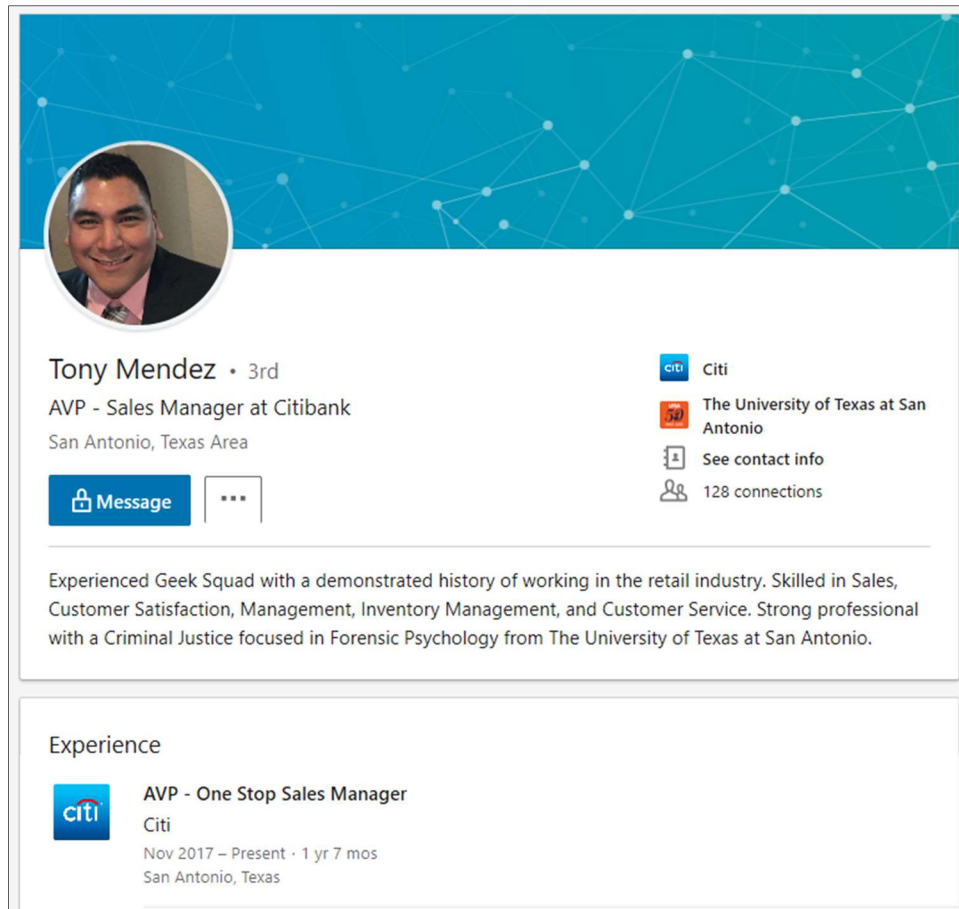
10. On May 2, 2019, an abbreviated search on [www.linkedin.com](http://www.linkedin.com) revealed 1,297 people as presently working for Defendant in the San Antonio, Texas area.



Showing 1,297 results

	<b>Jane Elizabeth Gomez</b> • 3rd Citibank San Antonio, Texas Area	<a href="#">Message</a>
	<b>Valerie Victoria Perez</b> • 3rd Citibank San Antonio, Texas Area	<a href="#">Message</a>
	<b>Melissa Villarreal</b> • 3rd Citibank - CSR San Antonio, Texas Area	<a href="#">Connect</a>
	<b>Blanca Abbud Citibank</b> Personal and Business Banker at Citibank San Antonio, Texas Area	<a href="#">Connect</a>
	<b>Amanda Howard</b> • 3rd Fraud Specialist at Citibank San Antonio, Texas Area	<a href="#">Connect</a>
	<b>John Garcia</b> • 3rd Citibank Commercial Banking Onboarding Analyst San Antonio, Texas Area Current: Citibank Commercial Banking Onboarding Analyst at Citi	<a href="#">Message</a>
	<b>Tony Mendez</b> • 3rd AVP - Sales Manager at Citibank San Antonio, Texas Area	<a href="#">Message</a>
	<b>Michael Alder</b> • 3rd CitiBank Operations and Technology -- Commercial Banking Services San Antonio, Texas Area Current: CitiBank North American Operations -- Anti Money-Laundering at Citi Financial Services	<a href="#">Connect</a>

[https://www.linkedin.com/search/results/people/?facetCurrentCompany=%5B%2211448%22%5D&facetGeoRegion=%5B%22us%3A724%22%5D&keywords=Citibank&origin=FACETED\\_SEARCH](https://www.linkedin.com/search/results/people/?facetCurrentCompany=%5B%2211448%22%5D&facetGeoRegion=%5B%22us%3A724%22%5D&keywords=Citibank&origin=FACETED_SEARCH) (last accessed May 2, 2019).



The image shows a LinkedIn profile for Tony Mendez. The header features a blue background with a white network diagram. On the left is a circular profile picture of a man with dark hair, wearing a suit and tie. To the right of the picture, the name "Tony Mendez" is followed by "• 3rd". Below the name is the title "AVP - Sales Manager at Citibank" and the location "San Antonio, Texas Area". To the right of the profile information are three logos: Citibank, The University of Texas at San Antonio, and a "See contact info" button. Below these is a "128 connections" indicator. A "Message" button is located below the profile picture. The main body of the profile contains a paragraph of text: "Experienced Geek Squad with a demonstrated history of working in the retail industry. Skilled in Sales, Customer Satisfaction, Management, Inventory Management, and Customer Service. Strong professional with a Criminal Justice focused in Forensic Psychology from The University of Texas at San Antonio." Below this is an "Experience" section with a Citi logo and the title "AVP - One Stop Sales Manager". The date range "Nov 2017 – Present · 1 yr 7 mos" and location "San Antonio, Texas" are listed below the title.

Tony Mendez • 3rd  
AVP - Sales Manager at Citibank  
San Antonio, Texas Area

Message

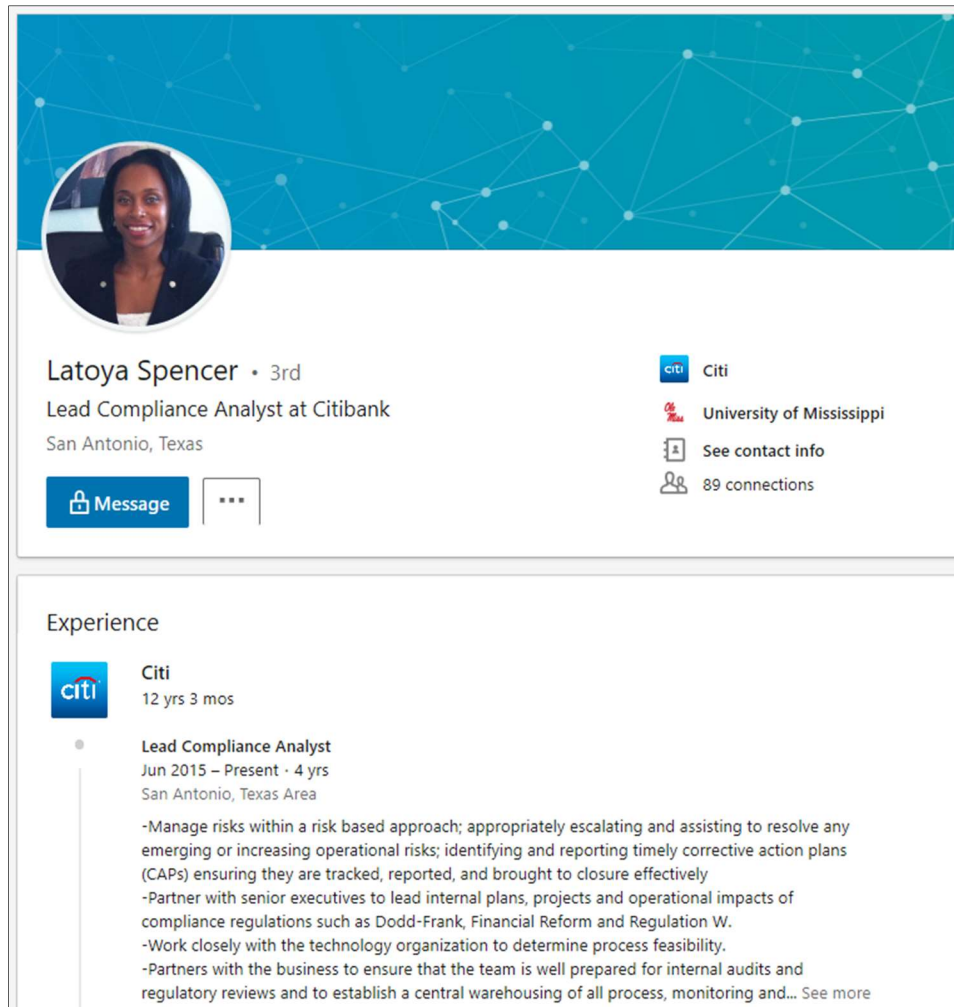
Citi  
The University of Texas at San Antonio  
See contact info  
128 connections

Experienced Geek Squad with a demonstrated history of working in the retail industry. Skilled in Sales, Customer Satisfaction, Management, Inventory Management, and Customer Service. Strong professional with a Criminal Justice focused in Forensic Psychology from The University of Texas at San Antonio.

Experience

Citi  
AVP - One Stop Sales Manager  
Citi  
Nov 2017 – Present · 1 yr 7 mos  
San Antonio, Texas

<https://www.linkedin.com/in/tony-mendez-81aaa9a4/> (last accessed May 2, 2019).



The image is a screenshot of a LinkedIn profile for Latoya Spencer. The profile header features a blue background with a white network diagram. On the left is a circular profile picture of Latoya Spencer, a Black woman with short dark hair, wearing a dark blazer over a white top. To the right of the picture, the text reads "Latoya Spencer • 3rd", "Lead Compliance Analyst at Citibank", and "San Antonio, Texas". Below this is a blue "Message" button and a three-dot menu icon. To the right of the header, there are three icons: the Citibank logo, the University of Mississippi logo, and a contact icon. Below these icons are the labels "Citi", "University of Mississippi", "See contact info", and "89 connections". The "Experience" section is below the header, showing the Citibank logo, the name "Citi", and "12 yrs 3 mos". A single job entry is listed: "Lead Compliance Analyst" from "Jun 2015 – Present · 4 yrs" in "San Antonio, Texas Area". The job description includes several bullet points: "-Manage risks within a risk based approach; appropriately escalating and assisting to resolve any emerging or increasing operational risks; identifying and reporting timely corrective action plans (CAPs) ensuring they are tracked, reported, and brought to closure effectively", "-Partner with senior executives to lead internal plans, projects and operational impacts of compliance regulations such as Dodd-Frank, Financial Reform and Regulation W.", "-Work closely with the technology organization to determine process feasibility.", and "-Partners with the business to ensure that the team is well prepared for internal audits and regulatory reviews and to establish a central warehousing of all process, monitoring and...". A "See more" link is at the end of the description.

Latoya Spencer • 3rd  
Lead Compliance Analyst at Citibank  
San Antonio, Texas

Message

Citi  
University of Mississippi  
See contact info  
89 connections

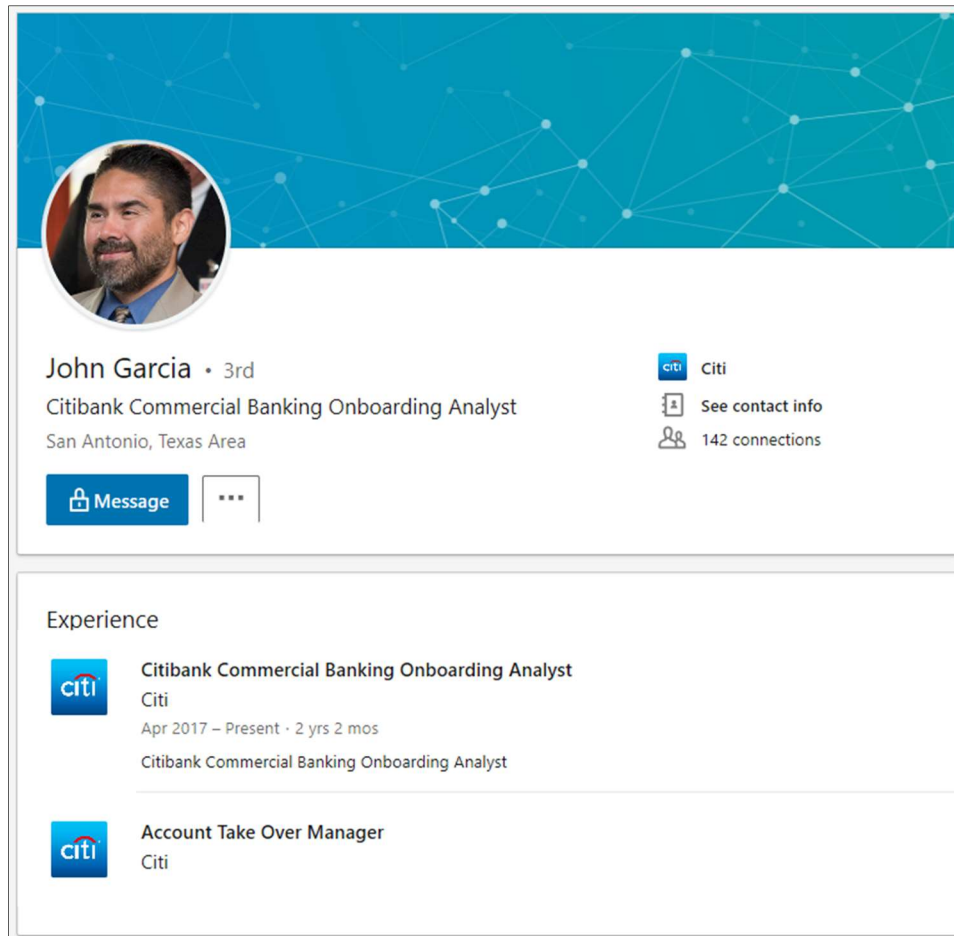
Experience

Citi  
12 yrs 3 mos

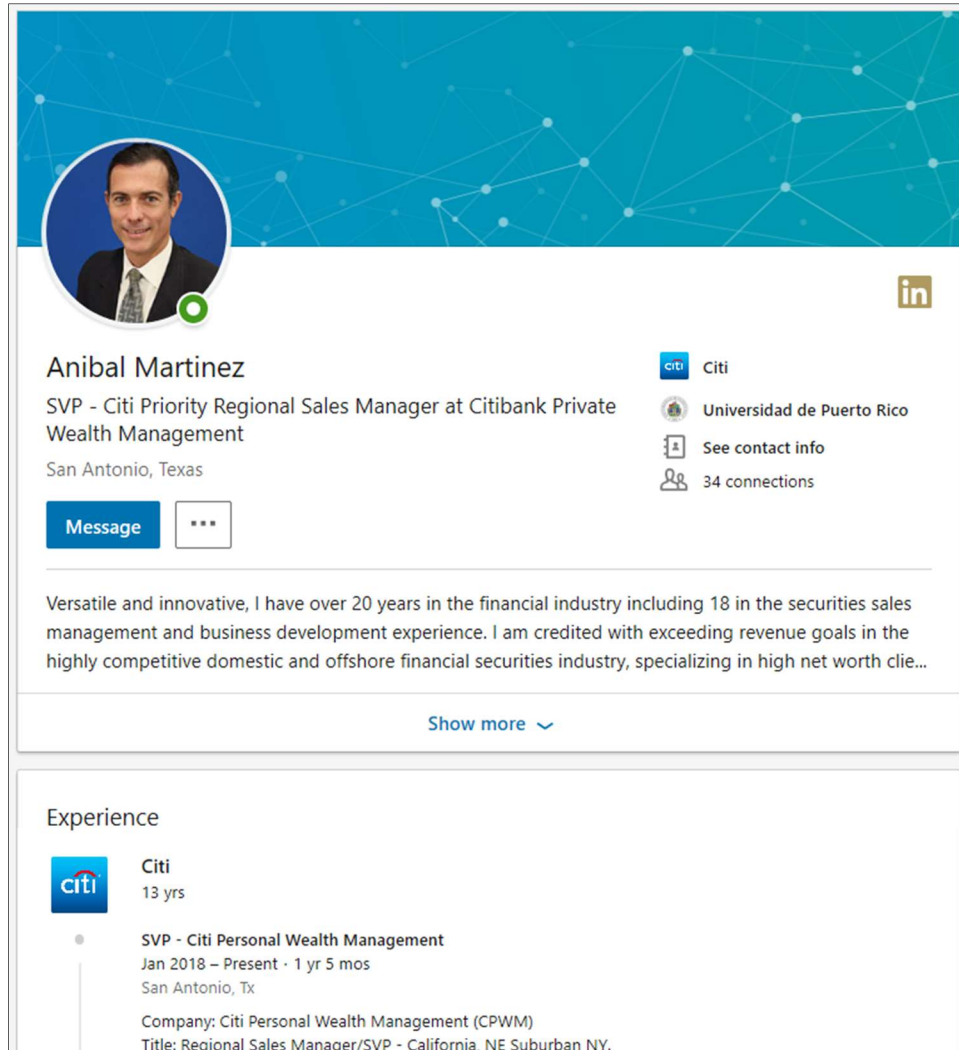
Lead Compliance Analyst  
Jun 2015 – Present · 4 yrs  
San Antonio, Texas Area

- Manage risks within a risk based approach; appropriately escalating and assisting to resolve any emerging or increasing operational risks; identifying and reporting timely corrective action plans (CAPs) ensuring they are tracked, reported, and brought to closure effectively
- Partner with senior executives to lead internal plans, projects and operational impacts of compliance regulations such as Dodd-Frank, Financial Reform and Regulation W.
- Work closely with the technology organization to determine process feasibility.
- Partners with the business to ensure that the team is well prepared for internal audits and regulatory reviews and to establish a central warehousing of all process, monitoring and... See more

<https://www.linkedin.com/in/latoya-spencer-02194675/> (last access May 2, 2019).

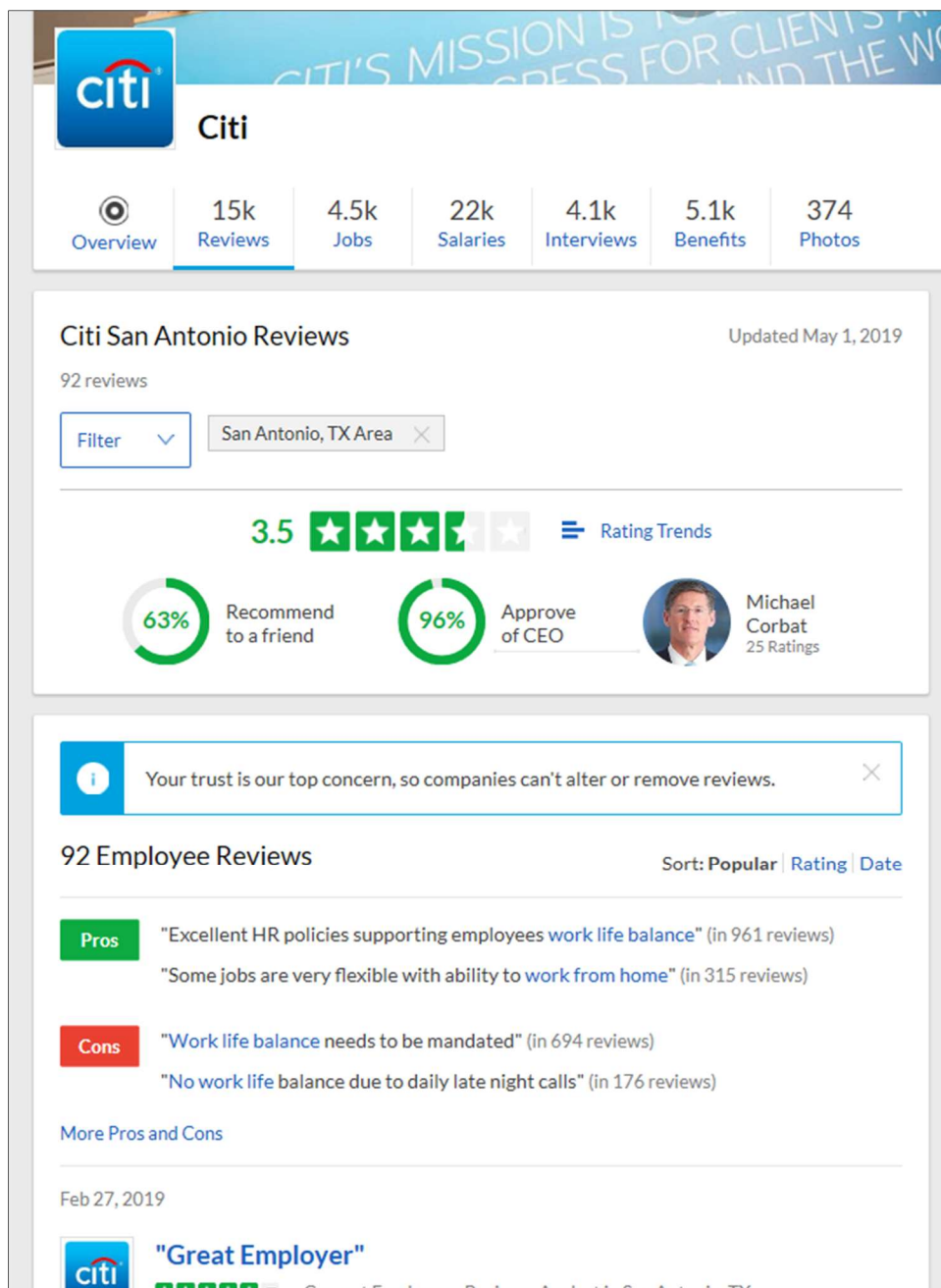


<https://www.linkedin.com/in/john-garcia-978903115/> (last accessed May 2, 2019).



<https://www.linkedin.com/in/anibal-martinez/> (last accessed May 2, 2019).

11. On May 2, 2019, a search on [www.glassdoor.com](http://www.glassdoor.com) revealed 92 employee reviews for Defendant by employees describing employment in San Antonio, Texas, including current employees working in the San Antonio, Texas area.




The screenshot displays the Glassdoor profile for Citi San Antonio. At the top, the Citi logo and name are shown. Below this, a navigation bar includes links for Overview, Reviews (15k), Jobs (4.5k), Salaries (22k), Interviews (4.1k), Benefits (5.1k), and Photos (374). The main section is titled "Citi San Antonio Reviews" and is dated "Updated May 1, 2019". It indicates there are 92 reviews and includes a filter dropdown set to "San Antonio, TX Area". The overall rating is 3.5 stars, represented by five green stars with the number 3.5. To the right of the stars is a "Rating Trends" link. Below the stars are two circular progress indicators: "63% Recommend to a friend" and "96% Approve of CEO". A profile picture of Michael Corbat is shown with the text "Michael Corbat 25 Ratings". A blue information box at the bottom of the reviews section states: "Your trust is our top concern, so companies can't alter or remove reviews." Below this, the section "92 Employee Reviews" is shown with a sort dropdown set to "Popular". Under "Pros", two quotes are listed: "Excellent HR policies supporting employees work life balance" (in 961 reviews) and "Some jobs are very flexible with ability to work from home" (in 315 reviews). Under "Cons", two quotes are listed: "Work life balance needs to be mandated" (in 694 reviews) and "No work life balance due to daily late night calls" (in 176 reviews). A link "More Pros and Cons" is provided. The date "Feb 27, 2019" is shown. At the bottom, the Citi logo is next to the text "Great Employer" and a row of five green stars.

<https://www.glassdoor.com/Reviews/Citi-San-Antonio-Reviews->

[EI\\_IE8843.0.4\\_IL.5.16\\_IM757.htm](#) (last accessed May 2, 2019).

Feb 27, 2019

 **"Great Employer"**  
★★★★★ Current Employee - Business Analyst in San Antonio, TX

☒ Recommends ☒ Positive Outlook ☒ Approves of CEO

I have been working at Citi full-time (More than 10 years)

**Pros**






- Great Medical
- Free access to Udemy.com
- Lots of avenues to grow
- Amazing work life balance
- Work from home opportunities

**Cons**

- Senior leadership can be cliquy
- Sometimes its who you and not what you know
- At the senior levels, navigating the political waters can be stressful

**Advice to Management**


If you're loyal to your employees, they will be loyal to you.

    [Helpful](#) 

<https://www.glassdoor.com/Reviews/Citi-San-Antonio-Reviews->

[EI\\_IE8843.0,4\\_IL.5,16\\_IM757.htm](#) (last accessed May 2, 2019).

May 1, 2019

 **"Back Office San Antonio"**  
★★★★☆ Former Employee - Escalation Specialist V in San Antonio, TX

☒ Recommends ☒ Positive Outlook ☐ No opinion of CEO






I worked at Citi full-time (More than 3 years)

**Pros**

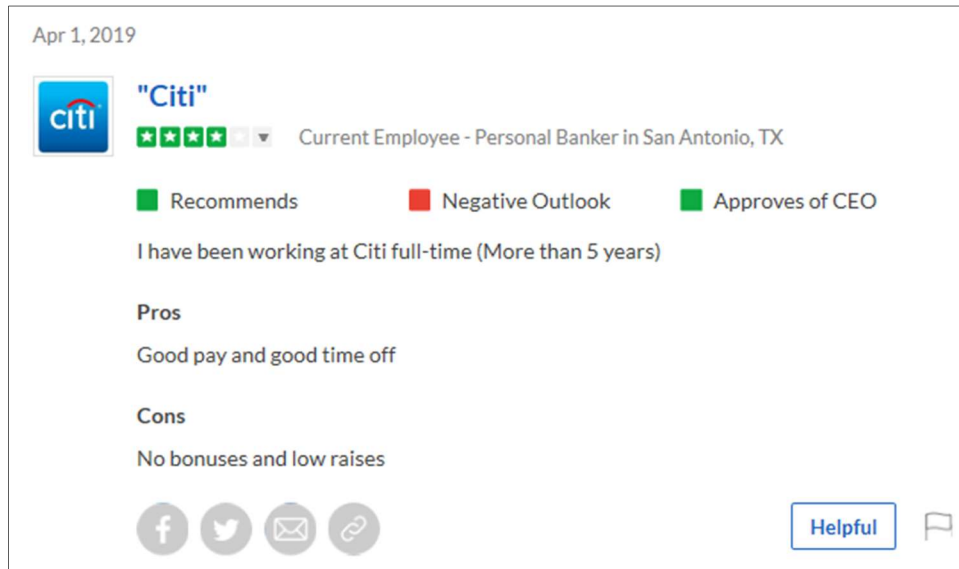
- The company really cares about the employees' health, room for growth, they truly believe in embracing diversity

**Cons**

- compensation sucks, procedures are very vague, no one seems to know anything

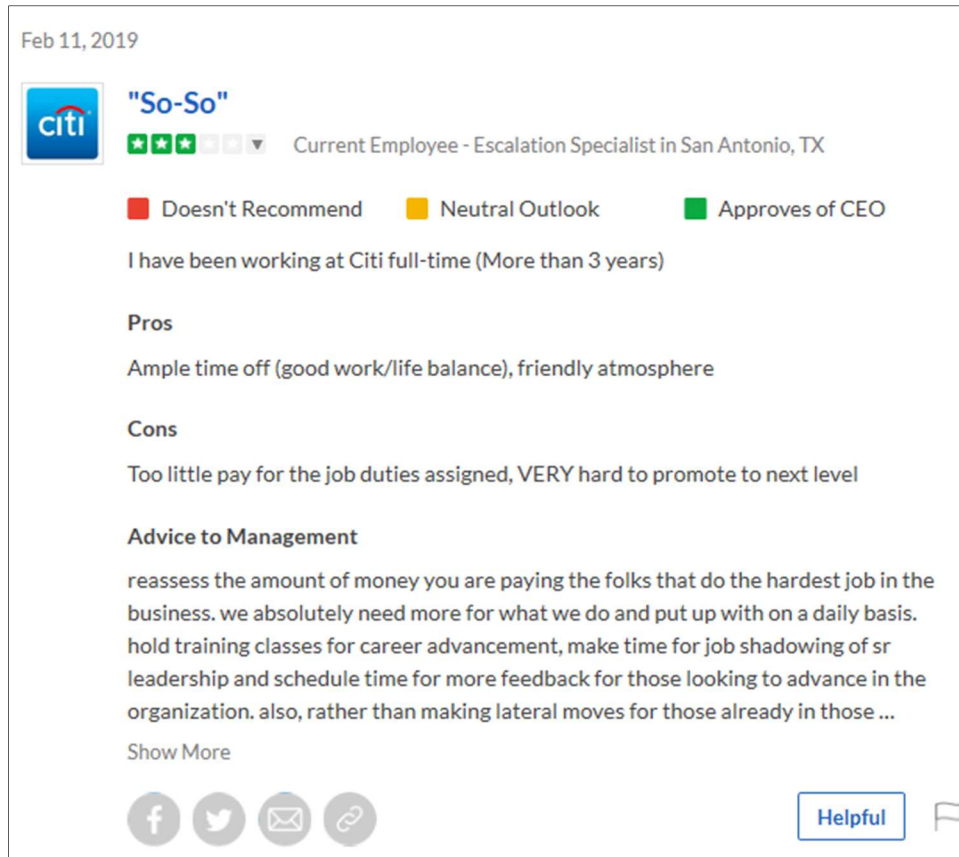
    [Helpful](#) 

[https://www.glassdoor.com/Reviews/Citi-San-Antonio-Reviews-EI\\_IE8843.0,4\\_IL.5,16\\_IM757.htm](https://www.glassdoor.com/Reviews/Citi-San-Antonio-Reviews-EI_IE8843.0,4_IL.5,16_IM757.htm) (last accessed May 2, 2019).



[https://www.glassdoor.com/Reviews/Citi-San-Antonio-Reviews-EI\\_IE8843.0,4\\_IL.5,16\\_IM757.htm](https://www.glassdoor.com/Reviews/Citi-San-Antonio-Reviews-EI_IE8843.0,4_IL.5,16_IM757.htm) (last accessed May 2, 2019).





<https://www.glassdoor.com/Reviews/Citi-San-Antonio-Reviews->

[EI\\_IE8843.0.4\\_IL.5.16\\_IM757.htm](#) (last accessed May 2, 2019).

12. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400 because Defendants have committed acts of infringement and have regular and established places of business in this judicial district.

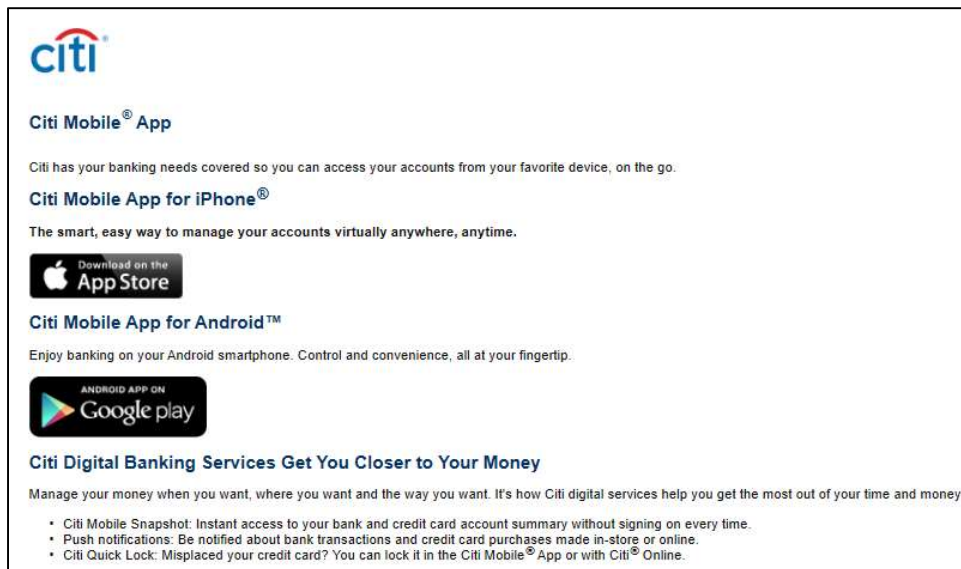
**COUNT I**  
**(Infringement of U.S. Patent No. 9,386,094)**

13. Lupercal incorporates the above numbered paragraphs as though fully set forth herein.

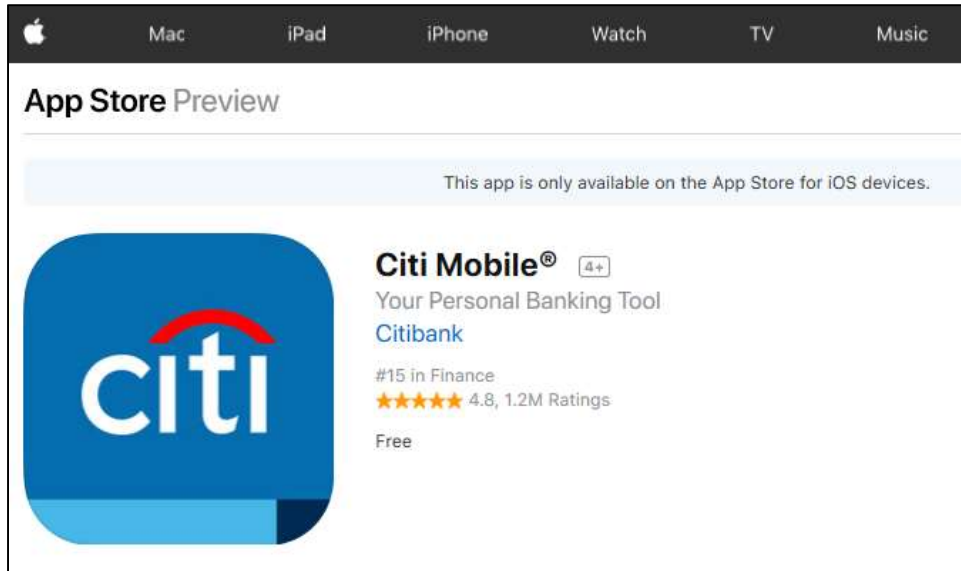
14. Plaintiff is the owner, by assignment, of U.S. Patent No. 9,386,094 (the "'094 Patent"), entitled SYSTEM AND METHOD FOR MEDIA SUBMISSION, which issued on July 5, 2016. A copy of the '094 Patent is attached as Exhibit A.

15. The '094 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

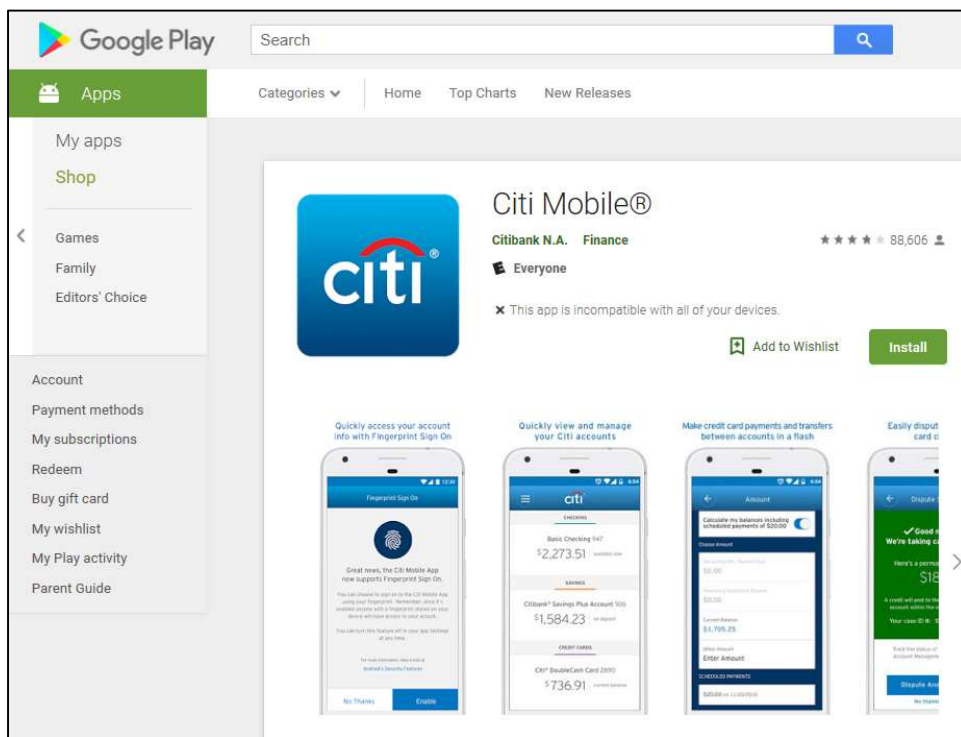
16. Defendant provides the Citi Mobile App for use with Apple iOS devices and Android devices, which is available for download from Apple's iTunes App Store and Google Play Apps:



<https://online.citi.com/US/JRS/portal/template.do?ID=MobileAppDownload&ProspectID=E8901F23285543A8A579EC24F4537885>



<https://itunes.apple.com/us/app/citi-mobile/id301724680?mt=8>



[https://play.google.com/store/apps/details?id=com.citi.citimobile&hl=en\\_US](https://play.google.com/store/apps/details?id=com.citi.citimobile&hl=en_US)

17. Defendant controls the operation and use of the Citi Mobile App and encourages its customers to use the Citi Mobile App to deposit checks to the customer's accounts with

Defendant. The Defendant's Citi Mobile App is the Accused Instrumentality through which Defendant and its customers infringe the '094 Patent.

18. At least by developing, distributing, operating, promoting, and encouraging the use of the Citi Mobile App, Defendant encourages its customers to use the Citi Mobile App to practice the claimed methods, which Defendant controls the use of and derives a direct benefit and profit from.

19. Upon information and belief, Defendant has infringed and continues to infringe one or more claims, including Claim 42, of the '094 Patent by developing, distributing, operating, promoting, and encouraging the use of the Citi Mobile App in the United States without authority. Defendant has infringed and continues to infringe the '094 Patent either directly or through the acts of inducement in violation of 35 U.S.C. § 271.

20. Defendant has been on notice of the '094 Patent at least as early as January 15, 2019 when it received a notice letter from Defendant, which included a claim chart comparing the '094 Patent claims to the Citi Mobile App.

21. Claim 42 recites:

42. A computer implemented method performed by an image submission tool on a user device, comprising:

causing the image submission tool to generate a visual representation of  
one or more images, the visual representation enabling a user to  
determine whether the one or more images should be replaced with  
one or more replacement images;

causing the image submission tool to enable a user to enter text information for association with the one or more images or the one or more replacement images;

causing the image submission tool to pre-process the one or more images or the one or more replacement images to produce one or more pre-processed images, the pre-processing by the image submission tool controlled by one or more pre-processing parameters received from a device separate from the user device in a conversion of the one or more images or the one or more replacement images as specified for use by a receiving party;

causing the image submission tool to enable a user to submit the one or more pre-processed images; and

causing the image submission tool to transmit the one or more pre-processed images.

22. The Citi Mobile App enables account holders to deposit checks electronically by taking a photo of the front and back of the check. After selecting an account to deposit the check to, the user enters the amount of the check.

23. The photo of the front and back is manually taken by the user—as a result, the images produced may be blurry or otherwise undesirable, and the application enables the user to retake a given photo (front or back). A visual representation of the photos is displayed on the screen.

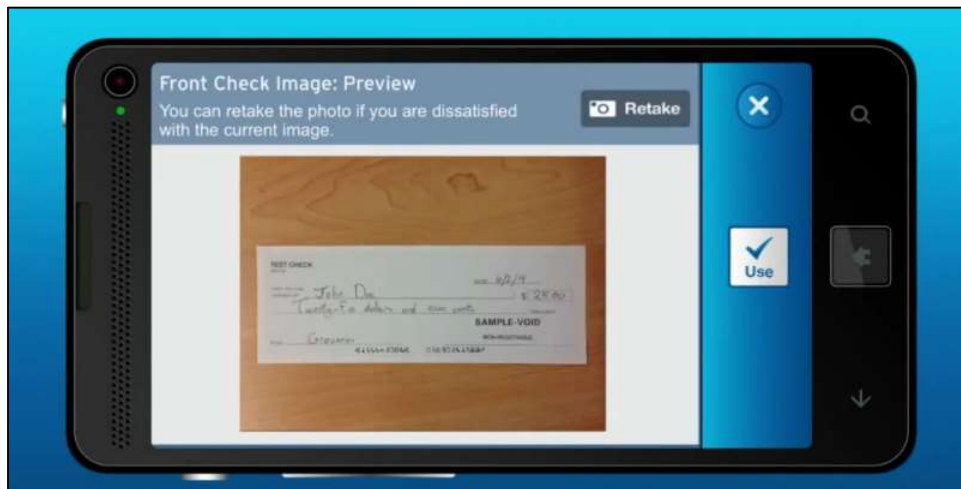
**How Mobile Check Deposit works**

After you've downloaded the Citi Mobile app for your iPhone®, iPod touch® or Android™ device:

- Sign on to your account in the Citi Mobile app and
  - If you have an iPhone, select "Move Money" from the menu, then "Deposit Check."
  - If you have an android device, select "Mobile Deposit" from the Quick Access bar.
- To enroll in the service, review and accept the terms & conditions.
- Select the account you want to deposit your check to and enter the check amount.
- Sign the back of your check.
- Free up enough **memory** for taking pictures by closing other mobile apps or restarting your device.
- Take pictures of both sides of your check, then submit the images for mobile deposit.

You'll receive confirmation emails when we receive your deposit, and when we accept your deposit for processing.

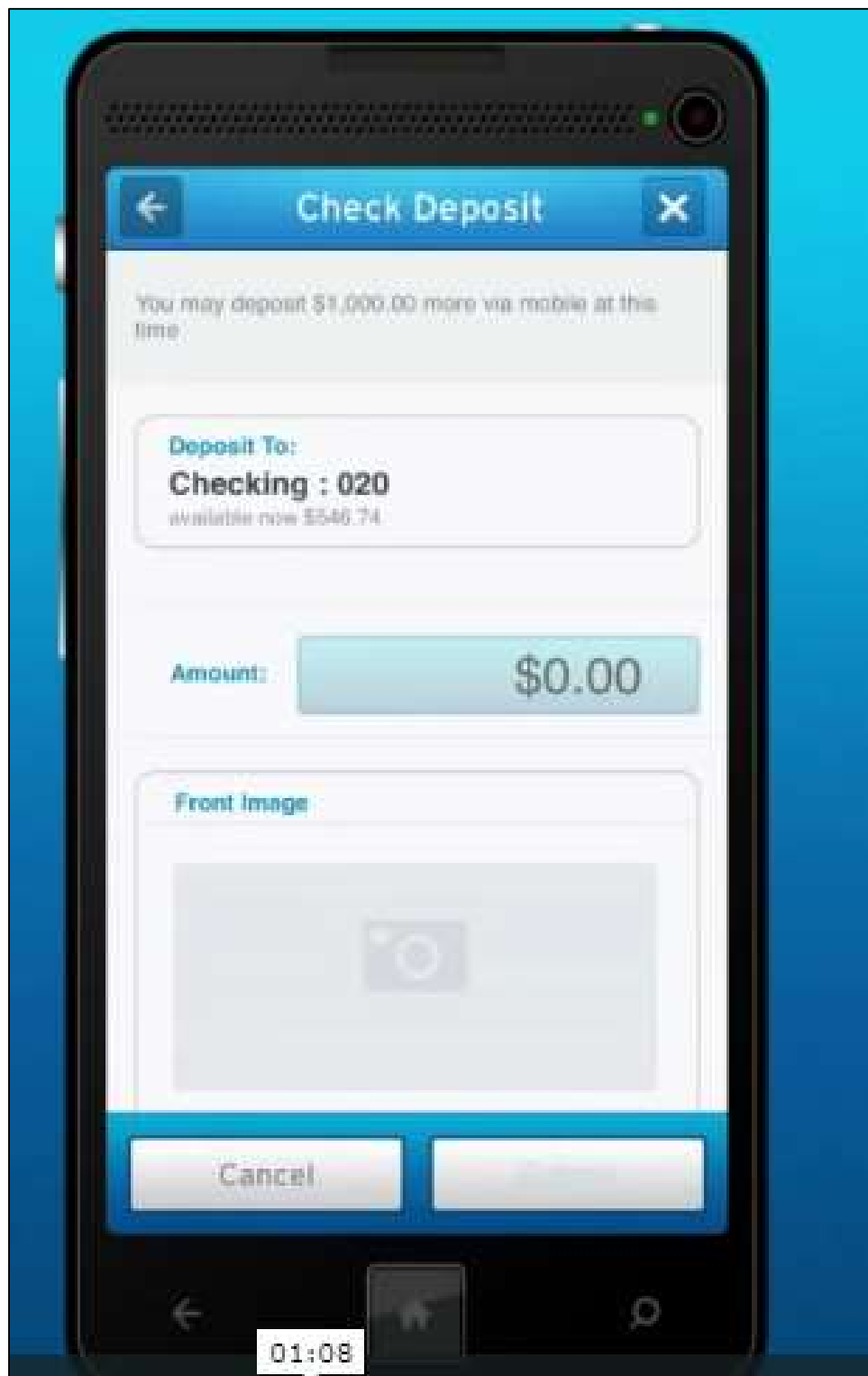
[https://online.citi.com/US/JRS/pands/detail.do?ID=MobileCheckDeposit&JFP\\_TOKEN=PYHN V8CL](https://online.citi.com/US/JRS/pands/detail.do?ID=MobileCheckDeposit&JFP_TOKEN=PYHN V8CL)



<https://vimeo.com/120721104>

24. After selecting an account to deposit the check to, the user enters the amount of the check.

- Select the account you want to deposit your check to and enter the check amount.




<https://vimeo.com/120721104>

25. Upon being accepted by the user (via the Citi Mobile App), the application pre-processes the front and back images to produce and front and back pre-processed images that is controlled by one or more preprocessing parameters received from a device (e.g., a server used to download the Citi Mobile App) separate from the user device (user's smart phone) in a conversion of the one or more images or the one or more replacement images as specified for use by a receiving party.

And Mitek has seen this in its own products as well as through its banking clients like CitiBank, which has been able to leverage products like Apple Pay to show how one payment innovation can be integrated into another. And that's what really can propel both innovations: by leveraging the best features of both into one seamless customer experience.

<https://www.pymnts.com/in-depth/2015/how-much-do-consumers-use-mobile-check-deposit/>



### Build your Mobile Deposit® app on Mitek's strong foundation

- Image analytics meet Check 21 Industry Standards
- Advanced algorithms automatically correct images; dewarp, deskew, distortion, and poor lighting conditions.
- Specialized OCR software for highly accurate MICR validation
- API for easy integration into mobile banking apps as well as core systems
- State-of-the-art encryption
- Various account capable so the user can select from the accounts
- Mobile Deposit® history review for deposits and processed images
- International Support – available and supported in many countries around the globe.
- Available for iOS and Android
- Hosted and On-premise deployment

<https://www.miteksystems.com/mobile-deposit>



**Check 21 Compliant Checks**

There have been some concerns about what modifications need to be made to check designs to make them Check 21 compliant. Check 21 facilitates image exchange by allowing banks to truncate original checks after imaging, and creating a new negotiable instrument called a “substitute check” or image replacement document (IRD).

*Specifications for an Image Replacement Document-IRD* (ANS X9.100-40) describes the requirements of the substitute check.

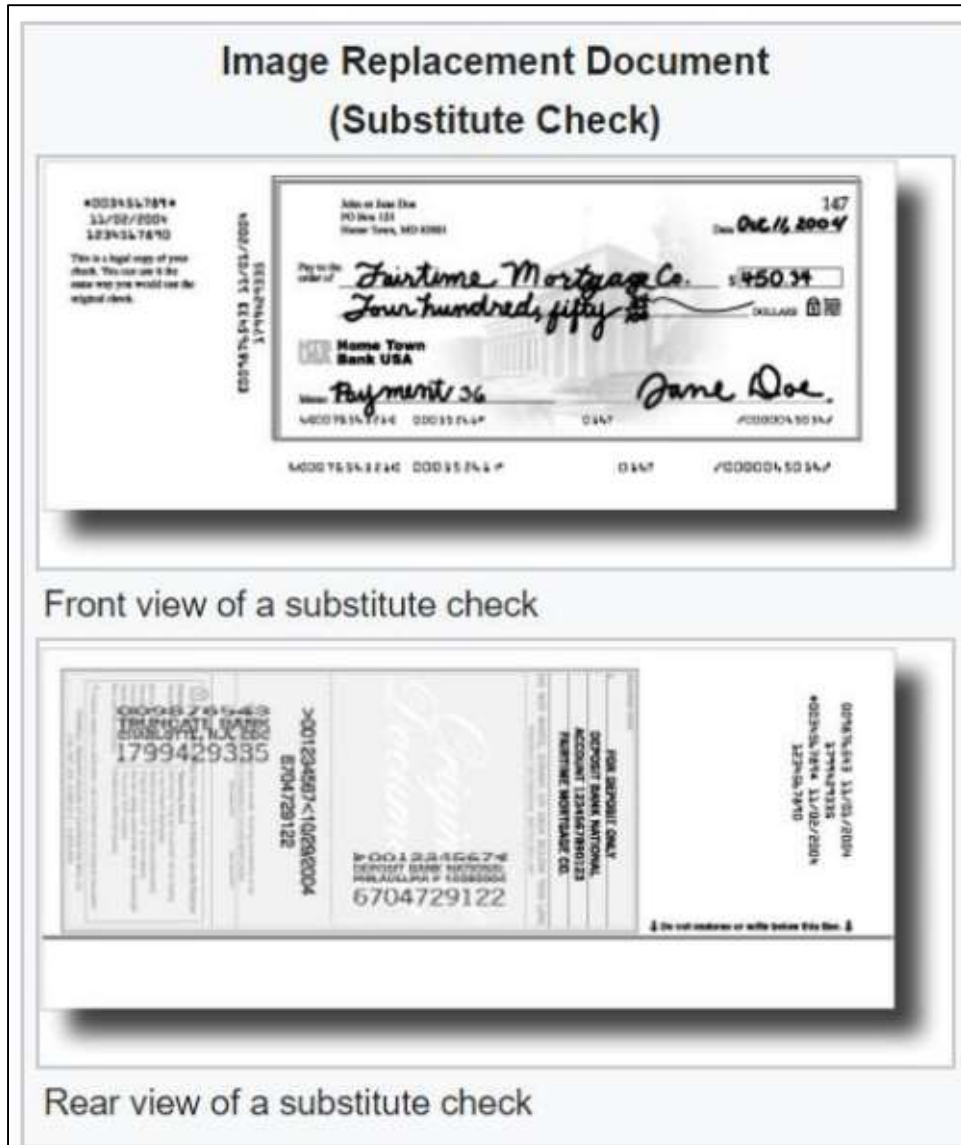
No new standards for check design have been defined as a result of Check 21. As long as our checks are American National Standards compliant, no design changes have to be made. Image quality is more important than ever with the possibility that a substitute check will be created from a check image. The *Bank Check Background and Convenience Amount Field Specification* (ANS X9.100-30 and ANS X9.100-110) and *Specifications for Check Endorsements* (ANS X9.100-111) are the standards most likely to affect the legibility of data in an image. These two standards specify background reflectance, clutter, and PCS of areas where important check data is found.

**Image File Size Issues**

As financial institutions move to imaging checks, bank operations are increasingly focused on image file storage size. Although there is no American National Standards limit on file storage size, financial institutions are choosing to set their own file size limits. Some of these institutions are choosing values so low that check security is threatened.

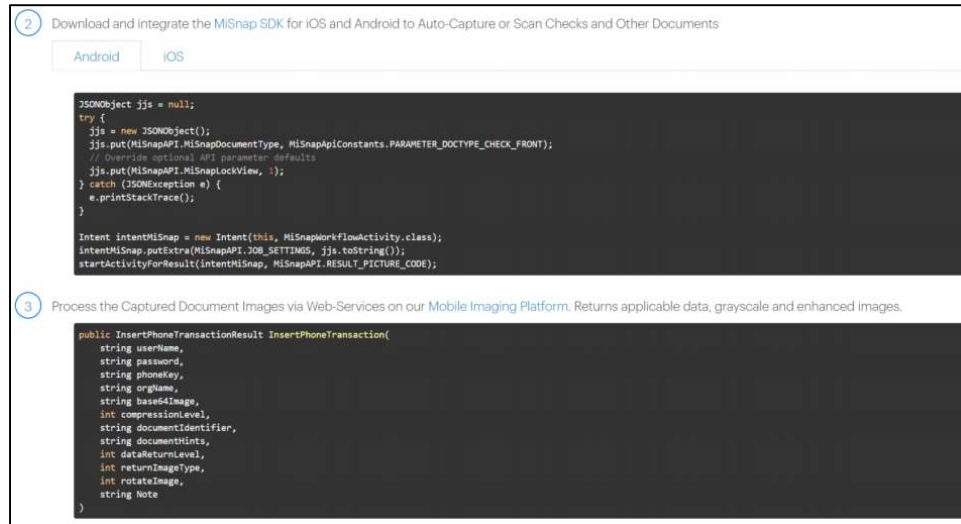
There are several reasons banks are pushing for smaller image file sizes. The primary reason is storage. As banks increase the number of items that they image, they will require more electronic storage capacity. In addition, banks may be providing their corporate customers with check images on removable storage, such as CDs. The banks want to minimize the number of CDs they need to send back to customers (optimally, one CD per customer). Finally, as banks begin to increase image exchange, image file size will play a major role in data transmission speeds.

[http://www.abagnale.com/pdf/checks\\_image\\_file\\_size.pdf](http://www.abagnale.com/pdf/checks_image_file_size.pdf)



[https://en.wikipedia.org/wiki/Substitute\\_checks\\_in\\_the\\_United\\_States](https://en.wikipedia.org/wiki/Substitute_checks_in_the_United_States)

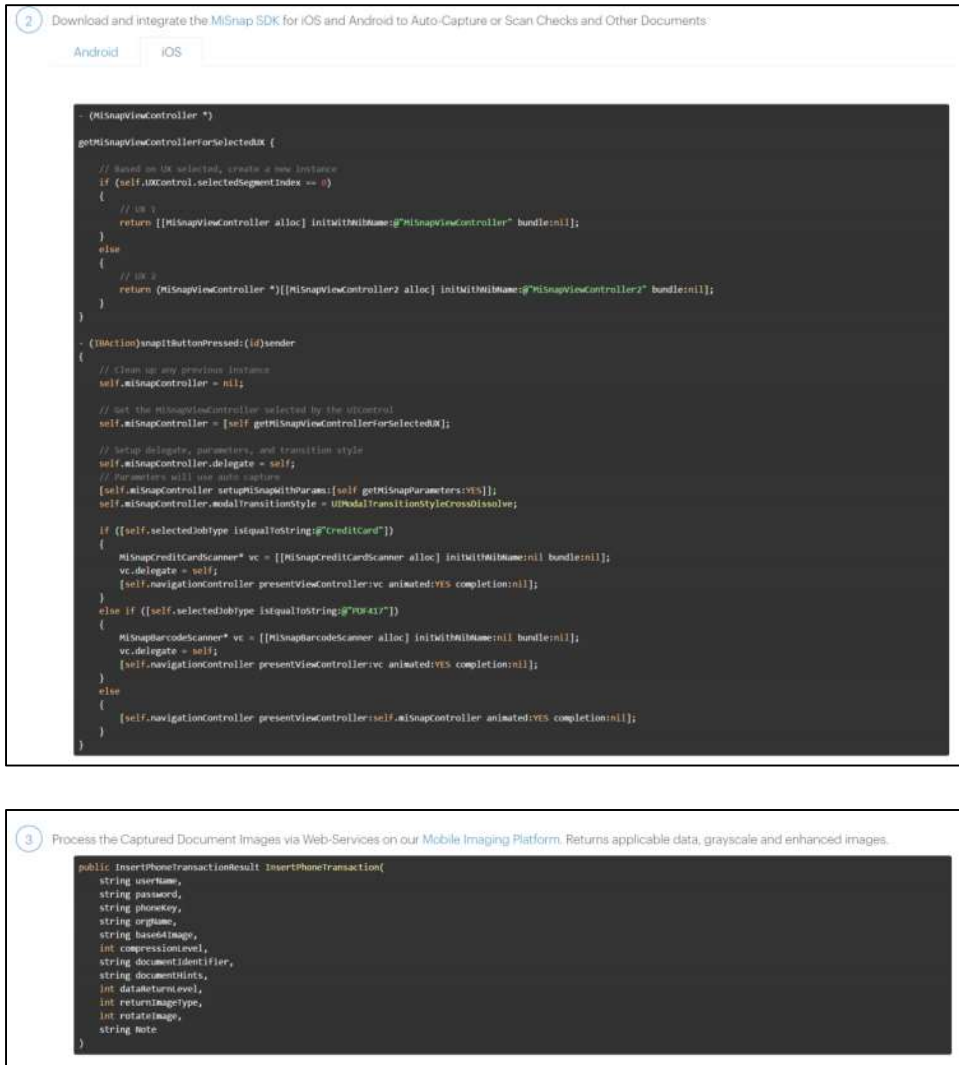
26. The parameters used for performing the pre-processing operations are part of the software library code (Mitek SDK) and API code provided by Mitek and used in the Citi Mobile App Mobile banking application.



<https://developers.miteksystems.com/>

27. The foregoing shows the Mitek MiSnap SDK interface code use to capture the image (top portion) and the Mitek Web Services interface (bottom portion) used for an Android mobile banking application using the Mitek SDK (software development kit) and code library. The image is sent as a base-64 format image to a Mitek Web Services server. The image capture interface code using Androids variant of Java. The Mitek Web Services uses a Java interface, and the “InsertPhoneTransaction” is a Java object.

28. The following shows the Mitek MiSnap SDK interface code used to capture the image (top portion) and then send the pre-processed image to the Mitek Web Services for further processing (bottom portion) using an iOS application. The image capture interface code using Apple’s Objective C language. “InsertPhoneTransaction” Java object is the same as used by the Android application.



29. The app enables the user to submit the pre-processed front and back images

- Take pictures of both sides of your check, then submit the images for mobile deposit.

You'll receive confirmation emails when we receive your deposit, and when we accept your deposit for processing.

30. Once the user hits submit, the pre-processed images are transmitted to a Mitek Web Services server.

- Take pictures of both sides of your check, then submit the images for mobile deposit.

You'll receive confirmation emails when we receive your deposit, and when we accept your deposit for processing.

31. The pre-processed images are first sent to a Mitek Web server to be processed using Mitek image processing Web Services, which (substantially immediately) return images of the front and back of the check that are compliant with the Check 21 substitute check requirements.

32. The Check 21 compliant images (substitute check) are then sent to a Citibank server. The processing performed by the Mitek Web Services is transparent to the user experience and is performed on the order of a second or less.

33. Lupercal has been damaged by Defendant's infringing activities.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests the Court enter judgment against Defendant:

1. declaring that the Defendant has infringed the '094 Patent;
2. awarding Plaintiff its damages suffered as a result of Defendant's infringement of the '094 Patent;
3. awarding Plaintiff its costs, attorneys' fees, expenses, and interest; and
4. granting Plaintiff such further relief as the Court finds appropriate.

#### **JURY DEMAND**

Plaintiff demands trial by jury, Under Fed. R. Civ. P. 38.

Dated: May 8, 2019

Respectfully submitted,

/s/ Raymond W. Mort, III

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LUPERCAL LLC**